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EXAMINER
ROCHE, TRENTON J

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PP24

	Application N(●)	Applicant(s)
Office Action Summary	09/729,448	PORKKA, JOSEPH A.
	Examiner	**Art Unit**	
	Trent J Roche	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 February 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

   4a) Of the above claim(s) *5, 6 and 26-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 7-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   This Office Action is responsive to Amendment A file received 18 February 2004.

2.   Per applicant's request, amended claims 19, 20 and 24 have been entered. Applicant's

remarks further indicated that claim 26 has been amended to further emphasize various novel

aspects of the claimed invention. Due to the fact that claims 5, 6 and 26-35 were nonelected with

traverse in Paper No. 4, it would appear that this is merely a typo and that the applicant intended the

remarks to point out claim 25 as being amended to further emphasize various novel aspects of the

claimed invention. As such, amended claim 25 has been entered.

3.   Claims 1-4 and 7-25 have been examined.

Election/Restrictions

4.   Applicant's election of Group I in Paper No. 4 is acknowledged. Because applicant did not

distinctly and specifically point out the supposed errors in the restriction requirement, the election

has been treated as an election without traverse (MPEP § 818.03(a)).

5.   This application contains claims 5, 6 and 26-35 are drawn to an invention nonelected with

traverse in Paper No. 4. A complete reply to the final rejection must include cancellation of

nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Rejections - 35 USC § 112

6.   The rejections of claim 20 and 24 under 35 U.S.C. § 112, 2nd paragraph, have been

withdrawn in view of the applicant's amendment.

Claim Rejections - 35 USC § 101

7.   The rejections of claims 20 and 24 under 35 U.S.C. § 101 have been withdrawn in view of

the applicant's amendment.

Claim Rejections - 35 USC § 102

8.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.   Claims 1-4, 7-13 and 15-25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent 6,457,170 to Boehm et al.

Regarding claim 1:

Boehm et al teach:

-       a system for building a software system ("a method and apparatus for building a software

        system..." in col. 2 lines 35-36)

-       a first component for building a list of file names ("the present invention generates a cache

        link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-

        48. Further, the development environment comprises "networked software development

        computer workstations wherein multiple workstations have access to one or more network

        caches." in col. 2 lines 37-39)

- a second component for distributing to one or more of the build machines one or more published files, identified in the list of file names, that are to be stored persistently by the one or more build machines ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28. Further, as noted in col. 9 lines 10-14, "the present invention can be practiced with...one or more local caches, if the present invention is being practiced on a standalone workstation." The files are inherently stored persistently in the local cache of the standalone workstation.)

substantially as claimed.

Regarding claim 2:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein the first component, second component and the one or more build machines execute on a single computer as claimed ("the present invention can be practiced with a single network cache the holes source and object files..." in col. 9 lines 10-12)

Regarding claim 3:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein the first component, second component and the one or more build machines execute on a plurality of computers as claimed ("In a preferred embodiment, there will be a plurality of network caches...one for each different host architecture..." in col. 9 lines 6-9)

Regarding claim 4:

The rejection of claim 1 is incorporated, and further, Boehm et al teach wherein each the first component, second component and the one or more build machines execute on separate computers as claimed ("In a preferred embodiment, there will be a plurality of network caches...one for each different host architecture..." in col. 9 lines 6-9)

Regarding claim 7:

The rejection of claim 1 is incorporated, and further, Boehm et al teach storing on a computer readable medium ("a storage medium that includes a certain amount of quickly accessible electronic storage..." in col. 5 lines 26-28)

Regarding claim 8:

The rejection of claim 1 is incorporated, and further, Boehm et al teach a list of published file names as claimed ("object file links are links from explicit object file names and potentially usable object files names to corresponding copies of the object file stored in cache." in col. 4 lines 16-19)

Regarding claim 9:

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed (Note Fig. 6 item 216 and the corresponding section of the disclosure. To copy to a network cache, a file transfer must inherently be initiated.)

Regarding claim 10

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed (Note Fig. 7A and 7B. To build the program, the builder must inherently initiate file transfers to the network caches for the purpose of receiving the information contained in the source files.)

Regarding claim 11:

The rejection of claim 1 is incorporated, and further, Boehm et al teach initiating file transfers as claimed ("Alternatively, software developers may want the option of manually updating the object file caches, by loading only selected object files..." in col. 15 lines 20-22. The file transfers are initiated by the user, which is a process other than those stated in the claim.)

Regarding claim 12:

The rejection of claim 1 is incorporated, and further, Boehm et al teach building a list of updates as claimed ("practitioners of the present invention may want to set up an automatic process for updating the object caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37)

Regarding claim 13:

The rejection of claim 1 is incorporated, and further, Boehm et al teach a data structure for storing the list of published file names (Note Fig. 8A, items 100 and 712. Data structures must inherently be used to store the information in these lists.)

Regarding claim 15:

Boehm et al teach:

- a system for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- employing a plurality of build machines ("In a preferred embodiment, there will be a plurality of network caches...one for each different host architecture..." in col. 9 lines 6-9)

- a component for broadcasting to one or more of the build machines one or more published build files ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

- a component for selectively receiving and storing persistently one or more of the broadcast published build files ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28. For the file to be stored in the network cache, a component must have received and stored the file. Further, as noted in col. 9 lines 10-14, "the present invention can be practiced with...one or more local caches, if the present invention is being practiced on a standalone workstation." The files are inherently stored persistently in the local cache of the standalone workstation.)

substantially as claimed.

Regarding claim 16:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for broadcasting as claimed (Note rejection regarding claim 2. The processes of the invention are shown to operate on one computer.)

Regarding claim 17:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for broadcasting as claimed (Note rejection regarding claim 3. The processes of the invention are shown to operate on a plurality of computers.)

Regarding claim 18:

The rejection of claim 15 is incorporated, and further, Boehm et al teach a component for broadcasting as claimed (Note rejection regarding claim 4. The processes of the invention are shown to operate on separate computers.)

Regarding claim 19:

Boehm et al teach:

- a method for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- collecting from one or more build machines, one or more files names corresponding to the one or more build files ("the present invention generates a cache link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48.)

- determining which of the one or more build files the one or more build machines are to send to a post build machine (Note Fig. 4, item 400 and the corresponding section of the

disclosure. Cache updating is performed via a post-build 'machine,' which is controlled by the central network controller.)

- persistently storing the one or more build files on the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28. Further, as noted in col. 9 lines 10-14, "the present invention can be practiced with...one or more local caches, if the present invention is being practiced on a standalone workstation." The files are inherently stored persistently in the local cache of the standalone workstation.)

- sending to the one or more build machines a list of file names of build files to be sent to the post build machine, and sending the one or more build files to the post build machine ("practitioners of the present invention may want to set up an automatic process for updating the object caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37. If the build object is found to need updating, it would be sent to the post build machine for updating.)

- determining which of the one or more build files the one or more build machines are to receive from the post build machine (Note Fig. 4, item 400 and the corresponding section of the disclosure. The system would inherently determine which of the updated build files the network caches should be updated with.)

- sending to the one or more build machines a list of file names of build files to be received from the post build machine ("the present invention generates a cache link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48.)

- distributing one or more build files to the one or more build machines ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

- persistently storing the one or more build files distributed to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28. For the file to be stored in the network cache, a component must have stored the file. Further, as noted in col. 9 lines 10-14, "the present invention can be practiced with...one or more local caches, if the present invention is being practiced on a standalone workstation." The files are inherently stored persistently in the local cache of the standalone workstation.)

substantially as claimed.

Regarding claim 20:

Boehm et al teach a computer-readable medium having computer-executable instructions. Note rejection regarding claim 7. Further, this claim is directed to a computer readable medium having stored thereon computer-executable instructions for performing the method of claim 19, and is therefore rejected for the reasons set forth in connection with claim 19.

Regarding claim 21:

Boehm et al teach:

- a method for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- collecting one or more build files from one or more build machines (Note Fig. 7A and 7B. To build the program, the builder must inherently collect files from the network caches for the purpose of receiving the information contained in the source files.)

- distributing the one or more build files to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 22:

The rejection of claim 21 is incorporated, and further, Boehm et al teach broadcasting the one or more build files to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 23:

The rejection of claim 22 is incorporated, and further, Boehm et al teach determining and storing the files as claimed ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive...renames the file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

Regarding claim 24:

Boehm et al teach:

- a computer-readable medium having stored thereon computer-executable instructions ("a storage medium that includes a certain amount of quickly accessible electronic storage…" in col. 5 lines 26-28)

- collecting one or more build files from one or more build machines (Note Fig. 7A and 7B. To build the program, the builder must inherently collect files from the network caches for the purpose of receiving the information contained in the source files.)

- distributing the one or more build files to the one or more build machines ("the source file handler checks out a copy of the source file from the software library archive…renames the file…and copies the renamed file into the proper network cache…" in col. 9 lines 24-28)

- determining which of the transmitted build files to store persistently, and persistently storing one or more of the transmitted files ("pre-loading one or more network cache memories with as much useful information as can be ascertained from the build list…" in col. 6 lines 2-4. Further, "the source file handler checks out a copy of the source file from the software library archive…renames the file…and copies the renamed file into the proper network cache…" in col. 9 lines 24-28. Finally, as noted in col. 9 lines 10-14, "the present invention can be practiced with…one or more local caches, if the present invention is being practiced on a standalone workstation." The files are inherently stored persistently in the local cache of the standalone workstation.)

Regarding claim 25:

Boehm et al teach:

- a system for building a software system ("a method and apparatus for building a software system..." in col. 2 lines 35-36)

- means for collecting from one or more build machines, one or more files names corresponding to the one or more build files ("the present invention generates a cache link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48.)

- means for determining which of the one or more build files the one or more build machines are to send to a post build machine (Note Fig. 4, item 400 and the corresponding section of the disclosure. Cache updating is performed via a post-build 'machine,' which is controlled by the central network controller.)

- means for sending the one or more build files to the post build machine ("practitioners of the present invention may want to set up an automatic process for updating the object caches that initiates whenever a new build list is checked into RCS." in col. 16 lines 34-37. If the build object is found to need updating, it would be sent to the post build machine for updating.)

- means for determining which of the one or more build files the one or more build machines are to receive from the post build machine (Note Fig. 4, item 400 and the corresponding section of the disclosure. The system would inherently determine which of the updated build files the network caches should be updated with.)

- means for sending to the one or more build machines a list of file names of build files to be sent to the one or more build machines and the build files to be received from the one or more build machine ("the present invention generates a cache link structure. The cache link structure is a system of source file links..." in col. 2 lines 46-48. Further, Note Fig. 8A, items

100 and 712 which indicate which files to be received from the build machines for the

purpose of building the complete program.)

- means for distributing one or more build files to the one or more build machines ("pre-

loading one or more network cache memories with as much useful information as can be

ascertained from the build list..." in col. 6 lines 2-4. Further, "the source file handler checks

out a copy of the source file from the software library archive...renames the file...and

copies the renamed file into the proper network cache..." in col. 9 lines 24-28)

- means for persistently storing one or more build files distributed to the one or more build

machines persistently one or more of the broadcast published build files ("the source file

handler checks out a copy of the source file from the software library archive...renames the

file...and copies the renamed file into the proper network cache..." in col. 9 lines 24-28. For

the file to be stored in the network cache, a component must have received and stored the

file. Further, as noted in col. 9 lines 10-14, "the present invention can be practiced

with...one or more local caches, if the present invention is being practiced on a standalone

workstation." The files are inherently stored persistently in the local cache of the standalone

workstation.)

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section
> 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the
> subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

11.   Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,457,170

to Boehm et al in view of U.S. Patent 5,339,435 to Lubkin et al.

Regarding claim 14:

The rejection of claim 13 is incorporated, and further, Boehm et al do not teach a data structure

utilizing a hash as claimed. Lubkin et al teach in an analogous system for building software the

storing of file names in a hashed data structure (Note col. 19, lines 3-21. "The pathname of each

BCT is then formed by the combination of element host type...and relevant element

characteristics...hashed together."). It would have been obvious to someone of ordinary skill in the

art at the time the invention was made to use the hashing data structure as disclosed by Lubkin et al

with the system for building software of Boehm et al, as this would allow the system to quickly

search the data structure containing file names by resolving hash values in the system disclosed by

Boehm et al.

Response to Arguments

12.   Applicant's arguments filed 18 February 2004 have been fully considered but they are not

persuasive.

Per claims 1, 15, 19, 21 and 25:

The applicant states that claims 1, 15, 19, 21 and 25 do not teach or suggest persistently storing build

files on one or more build machines. In response, it is noted in col. 9 lines 10-14 of Boehm et al,

"the present invention can be practiced with...one or more local caches, if the present invention is

being practiced on a standalone workstation." In this situation, as indicated above, the files are

stored in the local cache of the standalone workstation. Consequently, the published files must be

persistently stored on the standalone workstation. Furthermore, the aspect of the invention

disclosed by Boehm et al consisting of a single workstation encompassing the components does not

depart from the applicant's claimed invention, as claim 2 of the applicant's invention states "wherein

the first component, the second component and the one or more build machines execute on a single

computer." For these reasons, the rejections of claims 1, 15, 19, 21 and 25 are considered proper

and maintained.

Per claims 20 and 24:

The applicant states that the Examiner indicated that claims 20 and 24 would be allowable if

rewritten in independent form to include all of the limitations of the base claim and any intervening

claims. This, however, is in error, as the Examiner did not indicate the possibility of allowance in the

prior office action (Paper No. 5, note the rejections of claim 20 and 24 on pages 12 and 14), but

rather that claims 20 and 24 were rejected under 35 U.S.C. § 112 2nd paragraph, and 35 U.S.C. § 101

for including a reference to more than one statutory class of invention, and are therefore indefinite

and non-statutory. Note MPEP 2173.05(p). While the Examiner did suggest rewriting claims 20 and

24 in independent form, this was merely a suggestion such that the applicant could circumvent the

rejections under 35 U.S.C. § 112 2nd paragraph, and 35 U.S.C. § 101. Because the claims were

rewritten in independent form as suggested, the requirements under 35 U.S.C. § 112 2nd paragraph,

and 35 U.S.C. § 101 have been satisfied, and the rejections 35 U.S.C. § 112 2nd paragraph, and 35

U.S.C. § 101 have been withdrawn. However, claims 20 and 24 simply dictate subject matter which

was previously available in independent claims 19 and 21, respectively, and as shown above, the

rejections of claims 19 and 21 were proper and maintained. Therefore, the rejections of claims 20

and 24 are considered proper and maintained.

Per claim 14:

The applicant states that claim 14 is allowable as being dependent on an allowable base claim.

Furthermore, the applicant fails to show that the reason to combine and motivation concerning the

rejection of claim 14 is improper. As has been shown above, the rejection of claim 1 is proper, and

as such, the argument that claim 14 is allowable as being dependent on an allowable base claim is

considered moot. Therefore, the rejection of claim 14 is proper and maintained.

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS

from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the

mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Trent J Roche whose telephone number is (703)305-4627. The examiner can

normally be reached on Monday - Friday, 9:00 am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Kakali Chaki can be reached on (703)305-9662. The fax phone number for the organization where

this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system,

see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trent J Roche
Examiner
Art Unit 2124

TJR

TODD INGBERG
PRIMARY EXAMINER